

Brown Treesnakes: Islands at Risk

James Stanford
USGS BTS Rapid Response Team Coordinator



Fort Collins Science Center
U.S. Department of the Interior
U.S. Geological Survey

**BROWN
TREESNAKE** 
RAPID RESPONSE TEAM

The Brown Treesnake an unwanted Invader

- BTS facts
- BTS on Guam
- BTS threat to islands throughout the Pacific



Brown Treesnake Biology



- Active at night
- Camouflaged
- Excellent climber

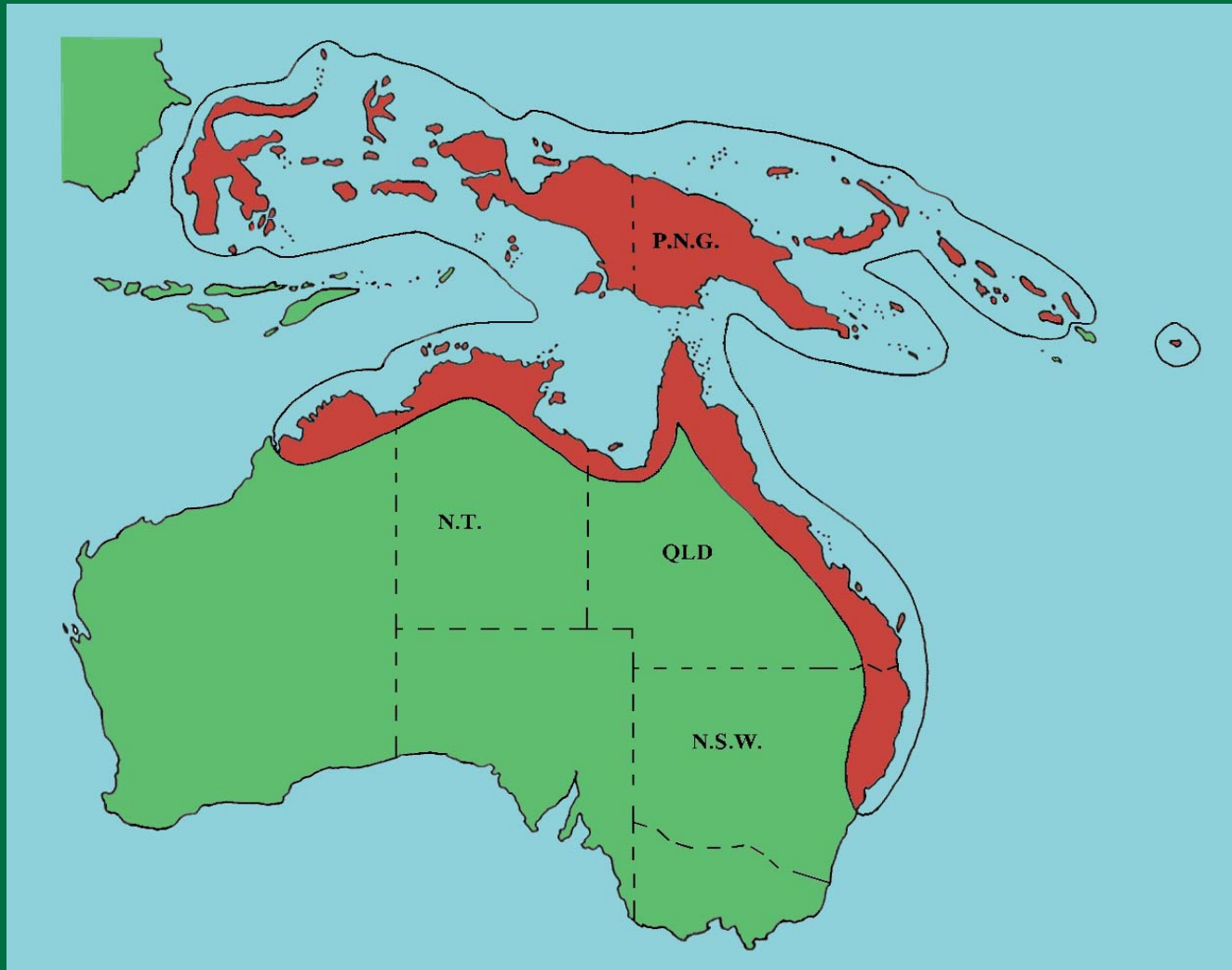
Size of Brown Treesnakes



0.5 <-> 3.0+ Meters



Native Range of the Brown Treesnake



Brown Treesnake on Guam

- Arrived in 1940's
- Spread throughout Guam by 1968
- Brown Treesnake Control and Prevention programs on Guam began in 1990



Photo by Christy Martin

Potential Prey of the BTS

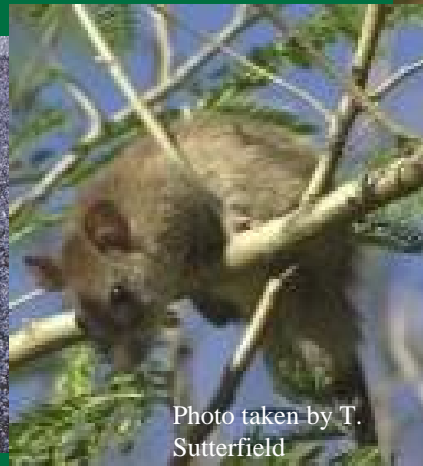
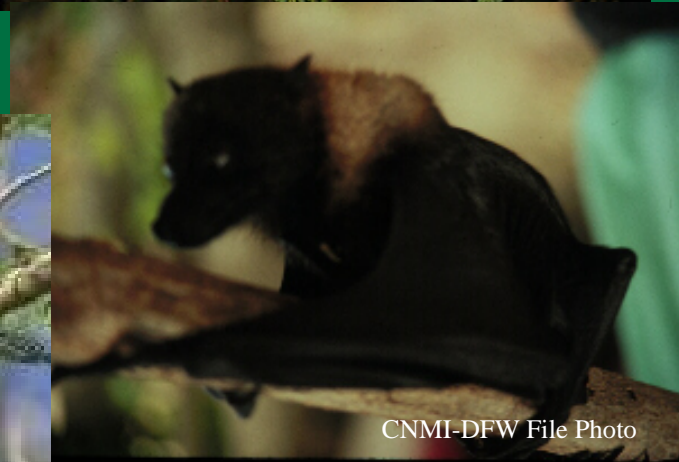


Photo taken by T.
Sutterfield



CNMI-DFW File Photo

Effects of Brown Treesnake on Guam

- Loss of species
 - Birds (10 of 12 native forest bird species extirpated by snake)
 - Lizards
 - Small mammals

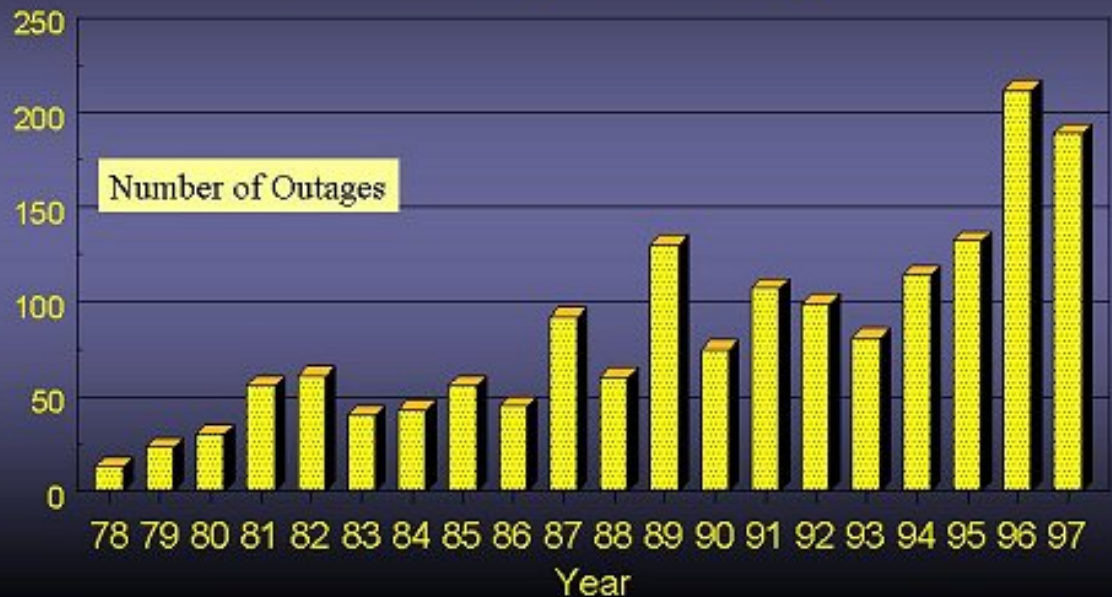


Effects of Brown Treesnake on Guam

- Loss of species
- Power outages



**Electrical Outages On Guam 1978-97
Due to Snakes (N = 1658)**



Effects of Brown Treesnake on Guam

- Loss of species
- Power outages
- Human health risks

Overall:

Significant
financial impact

Loss of \$\$\$\$\$

BTS Invasion Threat to Other Pacific Islands

- Snakes widespread on Guam
- Nocturnal; agile climbers
- Seek daytime refugia (e.g. cargo, wheelwells of airplanes)
- Able to survive adverse conditions: temperature, lack of food or water

Why are Islands Invaded by BTS in Jeopardy?

- Native island species easy prey for BTS
- No predation pressure or competition for BTS
 - Loss of native diversity and disruption of natural systems (food webs, etc.)
- Power outages, productivity lost
- Negative interactions with human populations
 - Tourism declines and other economic losses

Preventing the Spread of the BTS

- Control on Guam (USDA)
- Interdiction on islands at risk
- Rapid Response Team (USGS)



Control: USDA-Wildlife Services



Spotlighting

Traps



K9 inspections



Interdiction: Ports at Risk

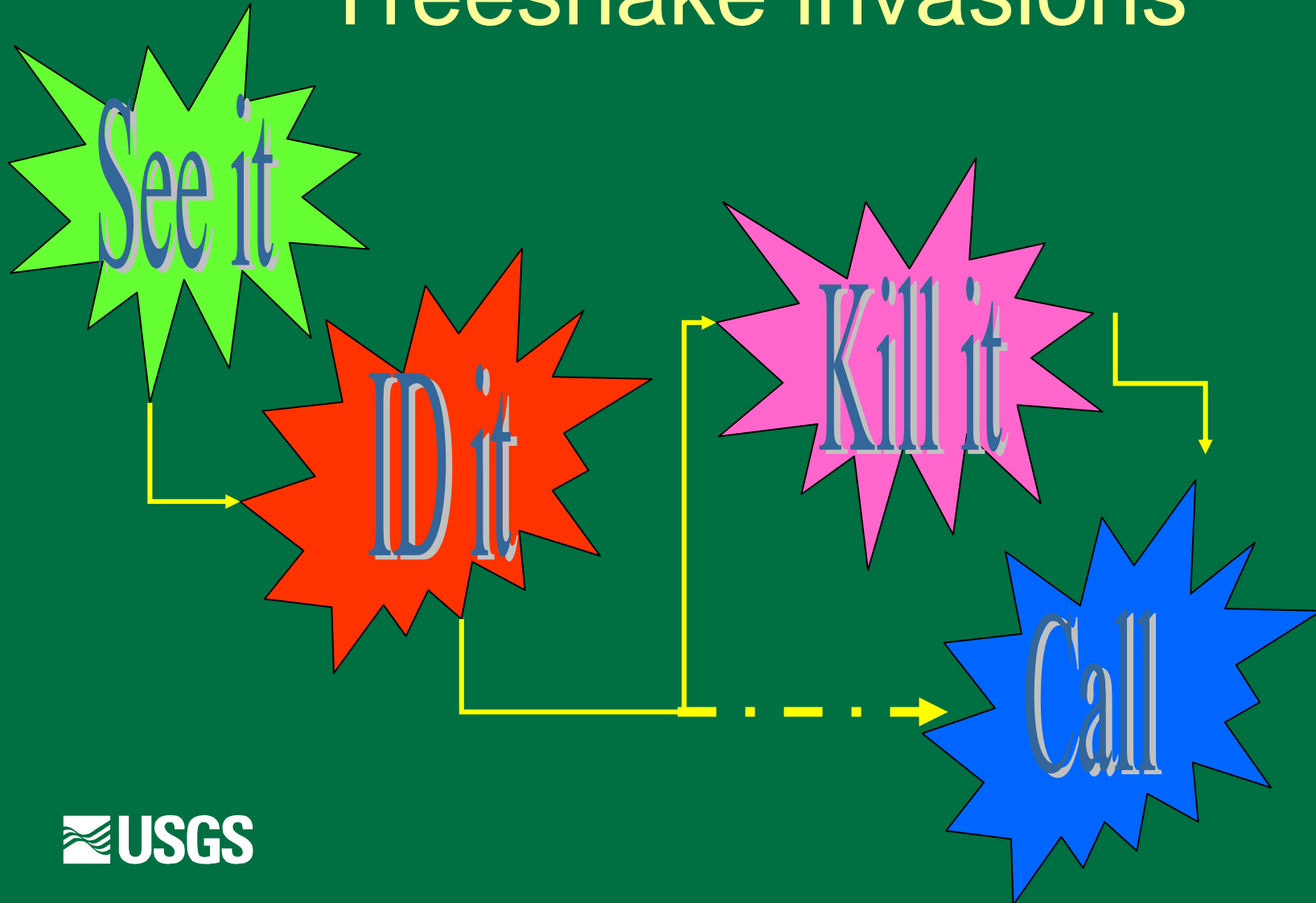
CNMI and Hawaii have active programs to inspect suspect cargo from Guam:

- Visual inspections of aircraft and containers on arrival from Guam
- BTS canine teams
- Quarantine facilities
- Detection training and response protocol

Response: USGS RRT

- Responding to BTS sightings to capture and remove snakes
- Getting locals involved in reporting BTS sightings
 - Outreach education throughout Micronesia
 - Workshops and training programs

Your Role in Preventing Brown Treesnake invasions







How to Kill BTS

- Hit the head with any heavy object
- Hold tail and crack head against wall or pavement
- Use machete, shovel or other sharp object to cut snake in half

KEEP ALL KILLED SNAKES FOR
IDENTIFICATION

Reporting Snake Sightings

- Each island at risk has a contact person and phone number for reporting snake sightings
- The USGS hotline number is also available and you can call collect:

671-777-HISS

Micronesia Snake Sighting Official Contacts

To report snake sightings on your island, call:

- CNMI: Nate Hawley- Division of Fish and Wildlife 28-SNAKE
- Hawaii: Hawaii Pest Control Hotline 643-PEST
- Palau: Remoket Ngiriou- Division of Quarantine 777-3613
- Federated States of Micronesia:

Ishmael Lebehn- Department of Agriculture

John Wichep- Division of Quarantine

- Yap: Andrew Fagolur 350-2183
- Chuuk: Sabino Robert 330-3170
- Pohnpei: John Wichep 320-7523
- Kosrae: Palikkun Tolenna 370-2559
- Marshall Islands: Henry Capelle- Ministry of Natural Resources and Development 625-4020

When You Report a Snake Sighting, What Happens?

- If the snake is captured:
 - Officials will collect snake
- If the snake escapes:
 - Officials will interview the person who saw the snake
 - A snake sighting response is initiated



- If requested by local officials, the RRT is available to assist
- The RRT will coordinate with local contacts to search for the snake using all available tools (traps, visual searches, detector dogs and others)

What Can You Do?

- Meet with RRT representatives to discuss options for specific airports
- Arrange for yearly BTS workshops for airport personnel and associated staff
- Display RRT BTS posters at regional airports

Awareness of the threat of BTS invasion is key

Individuals who work at or around ports (air and sea) are those most likely to encounter BTS and therefore it is essential that these individuals are aware of the issue and receive training on how to respond if they do see a BTS



Thank you!